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U. S. Department of Education
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Working Paper Series

Nested Structures: District-Level Data in the Schools and Staffing Survey

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Nested Structures:

District-Level Data in the

Schools and Staffing Survey

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June 1996

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This paper will present a number of arguments for the increased importance of within-state district-level data in systematic assessments of changes in the organizational structure of schools as educational institutions[1]. You will be asked to consider whether the next Schools and Staffing Survey (SASS) should shift its focus toward more macro-institutional district level processes rather than toward more micro-organizational classroom instructional models as proposed in other papers in this seminar series[2]. The arguments for a reconsideration of the role of district-level data in SASS are derived from several sources: (1) a review of sociological theories as applied to the organization of education in the United States; (2) a critical review of the 1993 SASS district level survey and its ability to uniquely answer important research questions; (3) the increasing importance of "choice" mechanisms for student assignment policies within the public sector[3]; and (4) recent policy research based upon studies of state-wide systemic reform efforts.

Many of the important organizational issues outlined below are amenable to more systematic empirical exploration even with the 1993 Schools and Staffing Survey (particularly as they involve between-state and between-district variations). The argument presented here is that the local school district is still an important mediating organization in the implementation of educational policy. From this review, it should be apparent that the 1993 SASS district-level survey should be supplemented by more yearly CCD school enrollment information (including 1990 demographic data from the School District Data Book), staffing data, and fiscal data. Through an examination of data on magnet schools, the feasibility of a multi-level linked approach will be examined in the context of a different sampling strategy. For some, the need for more programmatic information that can be provided by district and school level administrators is still an open-ended question for 1998. For others, however, top-down models of analysis are the prevailing, if not the only, strategy to study reform implementation effects. These research studies suggest that the addition of critical reform data at the district level could enable SASS surveys to become the established baseline survey for a large variety of hierarchical studies by the US Department of Education and the National Science Foundation.

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[1] The formal governance of public schools itself is another topic "... there is little agreement as to what the system actually looks like." (The Twentieth Century Fund, 1992)

[2] For example, Baker (1996) and Stodolsky (1996) implicitly link individual teachers to classroom instruction practices through a greater attention to content specific disciplines.

[3] This paper unfortunately can not address any of the important organizational parallels or differences between sectors (Baker, Han, and Keil, 1996, draft -forthcoming).

ADMINISTRATIVE STRUCTURES AND DISTRICT ORGANIZATION

Long-term historical trends. The state role in education has continued to expand rather than diminish during the 1990's. State funding and programmatic control of education has complex organizational implications for school districts and the management of schools within these districts[4]. Through the 1980's there was increasing complexity between different levels of government (federal, state and local), and at the same time, a more layered, formalized structure of control (multi-level and centralized) continued to develop. As the external environment imposed a multiplicity of new requirements, administrative complexity expanded substantially at the intermediate (i.e. school district) level[5].

A major factor in this increased complexity has been an increase in categorical funding at the federal level for a large number of special programs, and the emergence of new administrative subunits to monitor and oversee these programs within states and local school districts [6]. These additional layers of new authority typically have not displaced existing structures, and the current system of governance has preserved the legal autonomy of lower levels of power, primarily local school districts.

> "Local districts are fundamental governance agencies, by tradition and practice .... and their influence is extraordinary in world perspective. Despite the recent growth of state and national power, these districts make a great range of decisions, including those that bear on levels of funding, the nature of educational program, and the teachers to be hired." (Cohen and Spillane, 1991:6)

By most accounts, the resulting structures are highly fragmented, and from more critical perspectives "incoherent" (Cohen, 1995)[7]. The difficult (or unsettled) question is whether local responses to these new reform initiatives have amplified differences (i.e., increased rather than decreased variability) between districts and schools as new instructional policies are filtered through fragmented and heterogeneous organizations.

The diminishing share of local revenue as a component of the total operation of local schools reflects an important shift in the degree to which these authorities are now held more accountable to external standards imposed by these funding sources and to the parallel need to centralize the budgeting process and

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[4] How this centralized and integrated political culture survived reform-oriented competition in the 1980's is another question.

[5] This argument follows the discussion presented by Scott and Meyer (1987).

[6] The percentage of funding from states sources (45.6%) now exceeds local sources (44.7%), *State Comparisons of Education Statistics: 1969-70 to 1993-94.*

[7] The historical sources of this situation are traditional localism and federalism, mistrust of government, and political design.

personnel decisions at the district level[8]. The resulting interdependence between the district and its component schools has required more administrative coordination and an increasing number of professional administrators to "manage" the schools. One critical element of this administrative growth has been the addition of categorical programs (and the external accountability requirements) from state and federal sources to each district's operating budget. At the individual school level in larger school districts, the administration of these programs has involved a parallel increase in the number of administrators and program specialists. In some schools, however, the bureaucratic burden of many separate programs has generated a variety of school-wide reforms, and consequently ongoing decentralization efforts have been designed to counter the organizational effects imposed by the demands from these external authorities.

ANALYTIC ROLE FOR SASS DISTRICT-LEVEL DATA

The primary rational for the district-level survey (still identified as Teacher Demand and Shortage Questionnaire-TDSQ) in its first administration in 1987 was national concern with the prospects of teacher shortages, particularly in specialized fields and special programs.[9] Before I begin a more detailed review of other issues related to district-level information, it is important to identify the main questions that were the primary focus of the LEA questionnaire, and how analysis of administrator and teacher surveys provide alternative strategies to satisfactorily answer these questions[10]. In the 1987 and 1990 SASS, the "number of positions filled" was consistently high, approximately 99.0% in both years. As reported by district administrators less than .5% were vacant or unfilled. Similarly, districts reported that nearly 10 percent of their teachers were new hires, indicating that when positions became available they could find qualified teachers from available sources of new college graduates, teachers in other districts, private schools, or other sources.

At the other end of the spectrum, districts provided counts on how many teachers had been "laid off" for budgetary reasons (i.e., RIFs). In 1990, the percentage was only .6%. Although the percentage of "laid-off" teachers is not included in the *1993-94 SASS Statistical Profile* (because previous year estimates of faculty were not asked), a slightly different calculation for districts with more than 100 teachers indicated that 162 districts

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[8] The original argument was presented by Meyer, Scott, and Strang (1987), but has not been updated. Increasing sophistication in aggregate district-level and school-level data in CCD(supplemented by individual data from SASS school and teacher surveys) provide untapped resources to verify changes in these theories of bureaucratic complexity.

[9] Carnegie Forum on Education and the Economy, *A Nation Prepared: Teachers for the 21st Century, the Report of the Task Force on Teaching as a Profession*, 1986). The most detailed review is E. Boe and D. Guilford, *Teacher Supply, Demand and Quality* (1992).

[10] The most comprehensive review of SASS related research is contained in Ingersoll (1995a).

had reductions greater than 5 percent. Included in this group are several well-known districts where these large "cuts" merited notice in local newspapers (and even *Education Week*). Clearly, the down-side in teacher staffing numbers is concentrated in one-year when a "budgetary crisis" (often precipitated by declining student enrollments) occurs. As the frequency of SASS shifts to every five years, the inclusion of faculty trends for prior years from CCD may be more necessary to identify these long term trends.

Only a few tables in the *SASS Statistical Profiles* contain data from the Teacher Demand and Shortage Questionnaire (TDSQ). Many of the demand issues are adequately addressed by results at the school level (Table 7.2 Statistical Profiles: 1990)[11] and by questions related to the relative difficulty in filling vacancies by specific fields (Table 7.3 and Table 7.4). Likewise, the analysis of school level turnover rates (as measured by the percentage of teachers who left positions in the school in the prior 12 months) allows statistical analysis of school characteristics, private school status, district-level salary and benefits, and even workplace climate (Ingersoll, 1995b). In regard to the availability of new teachers and other characteristics of the teaching profession, the individual teacher survey has provided more detailed information on new teachers (Rollefson and Broughman, 1995)[12]. And finally, the teacher follow-up survey provides even more detail on the flow (and the reasons) that teachers move to other positions or leave the profession (Bobbit et el, 1991, Bobbit et al, 1995).

Districts after schools. Before other content areas of the district level survey are examined, a preliminary review of the sampling design is required. In three SASS administrations, all districts that had at least one school from the school sample were included in the LEA frame. As result, the average district in 1993 was represented by 1.7 schools. When national and state level estimates are made for student enrollment and staffing data, there is substantial overlap, and consequently the school level information and the district data are redundant [13]. A major design recommendation is the incorporation of some CCD district data directly into the interview instrument (but taking into consideration a lag between sample selection of schools[14] and data collection time

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[11] The school level question asked only if there were any unfilled position, not how many. It should not be expected therefore that aggregate school level numbers will provide precise estimates.

[12] The limitations of the LEA survey , which can only ascertain how many teachers were new hires in that district, are quite apparent compared to individual data. A substitute measure based on net aggregate change from CCD would probably be satisfactory.

[13] The sophisticated weighting of schools and districts insures close estimates. Nonetheless, there are some inconsistencies in district level responses such as counting k-12 but including pre-kindergarten counts in the CCD. The time frame sometimes is important with districts giving numbers as of the date when they are filling out the questionnaire rather the date specified in the SASS survey form.

[14] For example, the 1993-94 SASS public school sampling design is based upon teacher counts from the 1991-92 CCD (see Kaufman et al, 1996).

frames), and then the refinement of this information through more structured survey questions. In addition, basic data could be added on enrollment and teacher data for a fixed number of prior years[15]. The district level data should also include aggregated counts (students and teachers) for all schools in the district.

In the process of linking schools to districts (and both units back to teachers), certain varieties of governance structures become evident. Some of these state specific categories are more accurately identified in the current CCD district classification system[16]. An additional recommendation is to review district and school eligibility criteria to consider other types of instructional and support staff counts that are included in the agency universe survey since in some districts they are becoming more important elements in the "reform agenda."

In reconsidering the utility of the district survey, it is important to review the functions administrators perform and consider whether these administrative responsibilities should be incorporated into the next SASS. District staffs historically have had limited authority for instruction that is conducted in the classroom by teachers. Nevertheless, a high percentage of expenditures are no longer associated with instructional staff as conventionally defined[17]. A large number of routine administrative and budgetary tasks (some are generally not relevant to the objectives of SASS) are still performed by district staff. Some information, such as starting teacher compensation with different degrees and benefits (Table 5.3 and Table 5.4, *1990 SASS Statistical Profiles*) are already core variables and other questions have been asked for two administrations of SASS (AIR, 1996, in progress). A large number of personnel and student assignment decisions are made by district-level administrators (public schools only). But, the personnel office performs many other critical functions for teachers working in a district. Teachers are typically hired by the district and then assigned to specific schools[18]. Likewise, between school transfers of students and teachers are required to adjust for shifts in student populations and periodically school openings and closings necessitate even larger adjustments. More process questions (e.g., the school questionnaire could ask how vacancies were filled in a school with a check list and a rating of

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[15] When a LEA does not respond, simple variables, such as district size, for example, are treated as missing in SASS user files.

[16] There are seven functional categories including special regional purposes. Approximately 1197 districts (1992-93 CCD) have either no (or only one) school, and no students (but some also report FTE teachers). Schools in these districts are excluded from the sampling frame and therefore these LEAs properly are not included in the district frame. In the 1993-94, there was a process to sample these teachers, but only a small percentage were actually found to be teaching in regular districts. It is tempting to recommend a "footnote and exclude" philosophy for these districts with minimal staff and small numbers of students.

[17] Based upon CCD estimates, only 53.8% of the total public school FTE are teachers.

[18] Individual decisions are often made by the principal or hiring committee from filtered lists prepared by central office staff.

difficulty) seem to elicit more useful information about the outcomes of administrative decisions. District administrators could be asked how they have recruited new teachers over the last few years (types of strategies such as visiting local college campuses, national or local advertising), what disciplines were hardest to find and then hire (at this point pay incentives would be relevant to ask). Certification requirements for new teachers are usually established at the state level and district administrators can offer more information about recent changes in these policies[19].

New policies for "student performance" (e.g., the number of courses required for graduation and more rigorous standardized tests) have been enacted in recent years by many, but not all, states. The district questionnaire could ask whether a change has occurred (there should be a high degree of consistency within states) and then the respondent would indicate how the number of course credits changed when the policy was implemented. Likewise, most large districts have some written discipline and substance abuse issues (primarily for legal reasons). In response to federal and state initiatives, new policies have been adopted and the discipline implications for similar infractions represent a new policy dimension.

Many important policy decisions reflect school board actions, state legislation, and new federal programs which often are not accurately reflected at the individual school level[20]. For many programs, the funds are identified separately in terms of dollar amounts and funding sources. For example, the Eisenhower professional development grants are administered by local districts after they apply to state departments for approval of programs. Individual districts have wide latitude in the use of these funds: professional

[19] With a five year interval, the district and school survey should ask whether policy changes occurred during this period and if so in what year.

[20] In many large districts, attendance zones can be complex (particularly when choice options are available to some students), and they are established (and often adjusted on a yearly basis) exclusively at the district level.

workshops at a local university, national conferences, instructional sessions for teachers within a district, etc.[21]

Student assignment issues, however, are a policy realm under the near exclusive control of school district authorities in comparison to individual schools (with the exception of some districts still under federal desegregation court orders). In a narrow historical perspective, the district activities in this realm were quite conventional: fixing physical boundaries (that rarely changed), constructing a new school when enrollment expanded rapidly, selecting which school to close when enrollments declined, and then deciding which schools to consolidate (with limited adjustments in surrounding schools). In physically large districts, transportation imposed another set of fiscal and resource constraints. In the last 25 years, fundamental change has slowly displaced "the neighborhood school" linked solely to residence. In large central city districts, the change was abrupt when federal desegregation plans imposed new geographic configurations, but the transition was also facilitated by experimentation with district-wide "magnet schools" based upon distinct instructional programs that would attract opposite-race students. Besides the obvious benefit of dismantling "racially identifiable" schools, magnet schools enabled some schools within a district to formulate its own content emphasis, special themes, or school philosophy (and also recruit its own faculty for these purposes). The traditional uniformity of schools, imposed by a central "bureaucracy" no longer maintained its total control over students, faculty, and instruction in these schools, but also for the first time "market mechanisms" were incorporated in the school selection process (parents have an option to choose a magnet for their children or can leave if they were not satisfied). The current status of "choice" schools (and related developments in between-district choice and charters) will be reviewed in more detail in the next section. At this point, it is evident that identification of specific magnet schools can only be obtained at the district level where student assignment policies are implemented.

Multi-level analysis. The utilization of district-level information in prior SASS surveys and reports have been quite limited, and the additional questions included for the first time in 1993 (AIR, 1996) probably will not change interest in complex multi-level analysis. Ingersoll's *An Agenda for Research on Teachers and Schools* (1995a) does not identify a single issue where district-level data is a decisive factor in an important research question. Only, the recent studies by Chambers (1995 and 1996) explore the differential effects of school and district characteristics (i.e., measured by cost factors which local decision makers cannot control) on teacher salaries[22]. For example, the relationship between salaries and the racial composition of the district showed only

[21] The number and scope of these programs is well beyond the scope of this paper, but evaluation of these programs has frequently involved representative samples and structured surveys.

the percentage of students who were Asian Americans had a significant effect (the school level analysis had significant effects only for percentage Hispanic). In the Chambers study, however, the inclusion of district-level (and school variables) resulted in a substantial loss of schools (17.1%) and (also teachers) in the sample. The Ingersoll (1995b) analysis also had a large erosion in his school sample size (17.1%) when such district level variables as availability of merit pay plan, paid benefits, district size, etc. (and most were not significant) were included in his analysis of net teacher turnover rates[23].

The Chambers study (1996), although based upon 1990-91 SASS, does at least provide a model for making decisions about which type of questions should be asked to whom based upon multi-level statistical analysis. In his analysis, only a few district level variables have a significant effect in explaining differential teacher salaries. In fact, the three district level variables in his regression equations (district size, racial composition of the district, and enrollment growth) were obtained from CCD, and it is reasonable to assume that data from the district survey on pay incentives or fringe benefits probably would not explain additional variation in teacher salaries (above and beyond the combined effects of individual teacher background factors and school level factors). Using this method, one could determine if there was a district-specific effect for pay incentives offered to mathematics teachers for example, controlling for their education background and years of teaching experience. Likewise, this method of multiple level analysis could determine the additional contribution of district policies to differential teacher salaries[24].

Multi-level analysis is complex, and this alone might account for the limited use of district-level data by researchers. Similarly, missing data problems unexpectedly escalate when a district non response for a large district eliminates several schools from the sample. Moreover, the original CCD identification is difficult to reconstruct for schools with a missing district survey "after the fact." Most statistical software packages do not allow other sources of district data to be easily incorporated after SASS analysis files have been merged. Finally, multi-level analysis of between-school differences (controlling for district context) is severally limited by the non-hierarchical design feature of the SASS sampling strategy given the small percentage of districts with more than

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[22] The discretionary factors which districts can control were primarily measured by teacher characteristics (undergraduate major, highest degree, type of certification etc.) rather than district level data such as base salaries, etc.

[23] It should be noted that "climate" variables constructed from aggregating individual teacher responses to the school level had large impacts. While also accounting for some of the missing schools, aggregation is an alternative strategy to estimate higher level units.

[24] These equations allow one to estimate whether opposite race teachers (minorities teaching in white schools and whites teaching in minority schools) had higher salaries controlling for the racial composition of the district. The major effect was for Hispanic male teachers to have higher salaries than white male teachers, and this effect was not dependent upon the percentage Hispanic in the school or the district.

one school per district.

Schools after districts. The limited number of key variables in the SASS district-level questionnaire imposes practical difficulties in linking different levels. How conceptual issues related to district policies in turn impact schools within each district suggests a different design strategy for the new SASS: sampling districts first (based upon the number of teachers in the district's schools), and then sampling schools within these selected districts. A larger number of schools per district[25] thereby would be sampled in districts that have more than 10,000 students for example. In Appendix I, a comparison between the average number of schools per district with a district sampling strategy is presented with the results of the 1993 SASS.

Take a state such as Florida with large county-wide districts. SASS 1993 samples 258 schools, but they are scattered across 55 districts, giving an average of only 4.7 schools per district[26]. With districts sampled first, only 20 districts would be selected with an average of 20 schools per district. Utah, a more typical state, would have an average of 12.9 schools per district drawn from a sample of 20 districts (in 1993, the SASS average is 5.5 schools per district). Obviously in rural states, such as Iowa, an average of 2.8 schools per district is not a substantial improvement over 1.3 schools per district, and fewer sampled districts (67 versus 128 in 1993 SASS) does not improve district estimates when most districts are quite small. There are more than 175 districts which have student populations greater than 25,000 students (most have more than 25 schools) and at least 5-10 schools from each district would be selected with this strategy[27]. The number of schools, however, is also a function of the relative concentration of students in larger districts, and the average number of schools would vary by state[28].

Furthermore, a district-level survey would allow direct links to individual schools in each district through the LEA questionnaire. As will be elaborated in the following section, federal and state program funds are allocated to specific schools within a district, and accordingly the number of instructional staff allocated to these programs (such as magnet schools) would be enhanced through this type of multi-level design.

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[25] In some preliminary estimates, the average number of schools per district for the state of Michigan would increase from 1.2 per district to 4.8.

[26] Florida has a total of 67 districts.

[27] There are still over 6,000 districts with less than 600 students. Under this proposal fewer schools would be sampled and brief (if any) LEA instrument could be administered, thereby reducing total burden.

[28] In North Carolina, there are seven schools with student populations greater than 25,000 and an average of 19.7 schools (the range was 10- 37 schools) were sampled. Among the 14 smaller districts (population between 10 and 25 thousand), an average of 6.8 schools per district (the range was 3 to 13 schools) were sampled.

District-Wide Assignment and Choice

Districts have developed schools with special academic programs that attract students on a district-wide basis in order to comply with federal desegregation court orders. These "magnet" schools first emerged in the late 70's in several large northern districts. Initially, they often were part of a more global restructuring of school attendance boundaries and the emergence of noncontiguous assignment policies that have been responsible for major revisions in conventional "neighborhood " attendance zone practices in many districts. Their growth has been accelerated by federal grant programs (Emergency School Aid Act, Magnet School Assistance Program-1983), and increasing acceptance of voluntary student assignment components in desegregation plans by federal courts in the mid-1980s. In the last five years, more districts have been released from court supervision and have adopted expanded student choice options as a replacement for mandatory policies. Other reform movements have stimulated a broad interest in specialized "choice" schools in districts (often encompassing an entire district with "racial balance" a minimal consideration).

The particular combination of conventional attendance zone and district-wide choice policies reflect a district's long desegregation history. In broad terms, one needs to know when a district first desegregated its schools; whether a partial or district-wide remedy was required; whether a plan was phased-in over time; the statistical guidelines utilized for these desegregation plans; and the racial composition (and size) of the district when the first substantial desegregation plan was implemented[29]. Certain historical parameters, although difficult to establish initially, facilitate the tracking of these periodic modifications that are used by many large districts to maintain certain levels of "racial balance" through the provision of choice policies[30]. The evolution of district plans also shows the variations in magnet schools, from the "ideal" district-wide option for both minority and majority students, to schools that have district-wide options for students of one race and neighborhood options for students of the other race, and to smaller programs-within-schools where district-wide options are mixed with neighborhood assignment policies. In most cases, only the recent history is relevant since large changes in student assignments require well-publicized announcements by district administrators.

Most large districts are expanding choice elements in many schools and the implementation of more specialized curriculums has an indirect effect on those schools that do not offer "new" programs. Students are

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[29] The size of the district when a desegregation plan was first implemented (not a district's size when its current plan is assessed) is important to consider in order to avoid confounding growth in student population due to racial composition of the district and its metropolitan context with the long term effects of the plan independent of its specific components.

[30] Complex student assignment plans utilizing choice are typically not employed in smaller districts. In their initial plans, all-black schools were closed and attendance boundaries or grade structures were changed.

selectively drawn from large geographic areas and some teachers are "redeployed" from other schools to staff these new programs. Rarely has a magnet school been opened without consideration of district-wide racial balance (either to attract opposite race students for the first time or to maintain desegregation when it shifts from mandatory to voluntary assignments for some students). Even one magnet school with district-wide enrollment options has an impact on which students are enrolled in other schools. These attendance policies are administered by district administrators and school level principals are not fully aware of the interrelationship between who attends their school and the schools other students attend as a consequence.

Choice in the 1993 SASS. Questions concerning magnet schools were asked in both the SASS district-level and school-level questionnaires, and a reanalysis of the data offers a preliminary view of the inherent difficulties in translating policy options into clean simple survey language. Alternative question formats and more reliable results are fortunately available from a survey conducted in 1991-92 by AIR on magnet schools and desegregation plans. The 1993 SASS district level survey asked whether students could "enroll in another school or district outside their attendance areas"[31] and if the answer was "yes," the respondent could check enrollment in a magnet school or "enrollment in any school in this district" (and then the respondent would estimate the number of students in each program). Approximately 579 districts indicated that some students attended magnet schools[32]. It would have been preferable if the SASS questionnaire had provided a definition of "choice" that included some reference to a special emphasis or distinct curricular theme, and a district-wide enrollment option for some students (rather than "outside their attendance areas"- which is ambiguous as to whether this refers to school or district lines). Likewise, obtaining the number of magnet schools and their names is feasible, even in large districts. Brochures describing these programs are routinely sent to parents.

In SASS, the school was asked two distinct questions concerning special or magnet programs. First, it was asked "what type of school it is": a "regular" school, or whether it was a school with a "special program emphasis" such as "science/math " or "performing arts" (or voc/technical or alternative). The second response category should correspond to a "total" school magnet (without distinguishing between dedicated and partial attendance zones). The percentage estimate from the 1993 SASS is 3.0% magnet using the first definition, which is higher by 1.1% than the AIR figure. However, the racial composition of the magnet schools in SASS parallels the AIR survey (57.9% of the students are in schools greater than 50% minority in the former versus 56.5% in the AIR survey). Likewise, the SASS survey locates nearly 60% of the magnets in central city districts as

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[31] The was a additional condition concerning special needs students.

[32] For rough comparisons, the AIR study estimated that only 230 districts had magnets. This was a phone survey that included lengthy descriptions of what magnets were and their objectives for desegregation purposes.

expected.

A second question in SASS asked whether the school offered a "magnet program." This could reference "programs-within-schools" in contrast to total school magnets, but for some schools a "no" answer to this question could filter out schools that did not have a curricular focus and should not be considered as magnets in the conventional sense. Assuming the latter possibility, the SASS estimate is now 1.8% (1466 magnet/special schools weighted[33]).

We now turn back and ask the degree of consistency between the district and school surveys. Certainly in some districts, it is likely that no magnet school would be selected when a district indicates it has magnet schools (maybe one in four schools are magnet schools in a typical district with more than 10,000 students), and only 6.0% of the districts fit this pattern. If slightly more refined questions had been elicited from the district administrator (e.g., asking for the subset of magnet school names), some confusion would have been minimized. More problematic is the situation when a school identifies itself as a magnet, and the district indicates it has no magnets schools. In some cases, there were several magnet schools sampled and the districts are known to have comprehensive "choice"plans[34]. Nonetheless, we were able to match 501 districts where there was a "yes" response both to the magnet school question in the LEA survey and by one school administrator in that district (the weighted average number of magnets in large and mid-sized cities was 4.3 schools). Most districts did not, however, provide estimates as to the number of students in the magnet schools (they would need a list of the schools themselves to count participants)[35].

This preliminary exercise demonstrates the potential for SASS to explore complex policy issues in certainly a more cost-efficient manner than large scale retrospective surveys. AIR collected most of its information on magnet schools (in contrast to general desegregation information obtained in the initial interview) from a follow-up survey to the 127 districts than had choice plans. Another phase of the AIR study involved districts that had received federal Magnet School Assistance Plans grants over several years between 1985 and 1993. The grants cover a three-year time span, and 117 districts had obtained a least one grant. The survey gives some insight into the administrative infrastructure that implements these complex

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[33] The published figure in *1993 Statistical Profile* is 6.5% in reference to programs offered within schools in a manner comparable to bilingual or Chapter One (Table 2.4).

[34] The number of districts with this erroneous classification was only nine after the revised definition of a magnet school was used and some may have been nonresponses, such as Chicago and St. Paul.

[35] The "open enrollment" question did not provide meaningful numbers. In most small districts (with 1 type of school for each grade level), all students were in "open enrollment" programs. Between school transfers is a concept they are not familiar with.

student assignment plans using choice on a district-wide basis. Many of the districts used their program funds to hire new teachers and staff development for the magnet schools (besides substantial investments at the district level in program specialists). Implementation of new choice programs also required large scale outreach programs to attract new students and the development of more extensive transportation plans to handle district-wide choice. An interesting aspect of these choice mechanisms is the manner in which districts handled admissions, the priorities granted in the admission process, and the maintenance of waiting lists. Obviously if there is high demand, individual applications have to be administered and centralized at the district office, even in medium size districts. The questionnaire offers some insight into the administrative processes that are amenable to descriptive "check-listing" as approximate summaries of administrative decision making. Other reforms based upon choice mechanisms (between-district plans, charter schools, and voucher proposals) need similar administrative structures to attract students from large geographic areas.

DISTRICT-LEVEL STUDIES OF SCHOOL REFORM

In this section, the potential for linking SASS district level data to the assessment of state-level reform efforts is examined. Obviously, a variety of optimistic and speculative assumptions permeate this evaluation of SASS's potential as a baseline survey for ongoing comparative state-level studies. First, it is necessary to be optimistic that some program (and/or discipline specific) data can be successfully incorporated from CCD aggregate sources into SASS district level surveys as noted above. Second, one has to assume that basic commonalities can be extracted from the large number of "state" systematic studies currently being conducted, even though they involve only a few high-profile states[36]. Third, one must believe that the methodological split between qualitative ethnographic case studies and larger scale semi-structured surveys will diminish. Fourth, there is an expectation that additional investigations of state-level differences using the 1993 SASS can replicate certain findings from these reform studies. Finally, one has to assume that more comprehensive surveys on the effect of reform implementation will be administered at the state level to compare different types of policies. At a minimum, a more realistic understanding of the difficulties should emerge from a critical comparison of different methods, even in an area with clearly established standards such as mathematics.

A valuable introduction to some of these issues can be garnered from a recent Michigan State report,

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[36] The criteria for state selection is driven by standards-setting criteria, primarily increases in the number of mathematics and science credits required to graduate from high school. Comparable state data on credits, revisions of guidelines to align with NCTM standards, and test requirements for graduation are currently reported in Table 17 in *State Comparisons*.

The Local Government Policy System Affecting Mathematics and Science Education in Michigan: Lessons From Nine School Districts[37]. The methodological framework for this study has developed from a series of evaluations (see James Spillane, *Districts Matter: Local Educational Authorities and State Instructional Policy*, (in press) where the "key role" of LEAs in instructional policy making is apparent[38]. Michigan's reforms are representative of initiatives that are designed to radically restructure instructional practices in a state and incorporate a specific set of state developed policy recommendations as outlined in "Essential Goals and Objectives"[39] that are linked to national frameworks in mathematics (NCTM) and science (AAAS). The objective of the Michigan State study was to determine what local school districts were doing to reform mathematics and science education (i.e., what changes were occurring) and what "influences the way local schools make policy about mathematics and science education."

Nine districts were selected based upon geographic location, district size and urban type, social and ethnic composition of student population, and "reputation" for reform activity. It should be noted that the range of variation rather than statistical representation was the primary consideration in district selection. Accordingly, the study included two large mid-size city districts with high minority and high percentages of "free lunch" students, but it also included smaller low minority rural districts with substantial percentage of students receiving "free lunch."[40] The interview selection process within each district is more complicated. First, central office personnel with instructional responsibility were interviewed; second, for the two elementary, one middle, and one high school from each district in the study, the principal was interviewed, and third, teachers with the "lead role" in mathematics and science education were also part of the study[41]. The total number of interviews ranged from 13 to 32 per district, and these open-ended interviews were then

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[37] This ongoing study was funded by the Michigan Statewide Systemic Initiative under the direction of James P. Spillane.

[38] This an ongoing three part study that is properly classified as a "policy implementation" research..

[39] The development of these new standards is contained in Thompson, Spillane and Cohen, *The Policy System Affecting Science and Mathematics Education in Michigan* (1994).

[40] This type of district selection strategy , common in most state-level evaluations, implicitly reflects the interest to find the widest range of different types when only a limited number of districts can be studied in depth.

[41] In principal, 36 schools would constitute the selected school sample for these nine districts , although in the smaller districts fewer schools were part of the sample. The 1993-94 SASS sampled 227 schools (7%) in Michigan, based upon the number of teachers in the state. In general, Michigan (558 districts) has a large number of smaller districts with 27.1% of its students in districts less than 2,500 compared to national levels.

transcribed[42]. Six categories were used to code the first round of interviews: background information on the district, substantive ideas about mathematics and science, the efficacy of LEA policy, the opportunity for teachers to learn about policies, and local perspectives on state and federal policies.

At this point, it is necessary to review the broad outline of national NCTM standards and some of their implications for state policies before district implementation can be discussed (this is classic top-down reform). At a general level, these standards outline a general set of topics organized around four basic themes (problem solving, communication, reasoning and connections) and then more grade-specific recommendations for alignment of content coverage[43]. In this study, the state document *Essential Principles* was generally recognized as a set of new policies that required substantial changes in curricula, instructional practices, textbooks, etc. by all districts. The Spillane et al conclusion, however, is clear: "The reform rhetoric masks significant variability across and within districts " (p.34). While all districts indicated that they were implementing the new state guidelines, the details of specific reforms revealed distinct differences in the priorities given to different themes. Only three districts had moved beyond more routine topic identification toward substantive alignment as they relate primarily to two criteria (communication and reasoning) when compared to the other districts that gave more attention to other themes (problem solving and hands-on mathematics). More specifically, in these latter districts new concepts became new "labels" for old activities ("hands-on" became the same use of concrete materials -- "manipulatives" and "integration of concepts" became more group activities). The rich discussion in this report suggests an underlying rank order in the implementation of these reforms that are measurable when one asks about certain topics for certain grades.

The findings for science demonstrate how seemingly parallel state frameworks generate qualitatively different levels of change. The AAAS science standards[44] emphasized connections and common themes between disciplines, teaching a smaller number of central scientific ideas, and developing students' ability to utilize scientific methods and technology. While all districts were either purchasing curriculum guides from outside sources or developing their own, these materials were only aligned topically to the state frameworks. In the four

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[42] More structured interview protocols for district-level personnel were developed in the *Reform Up Close* study. There are certain characteristics of district-specific policy that appear to be" common": is there a "framework" document that the district has adopted, who decides what textbooks will be used, is there a testing program in the district, and have there been changes in graduation requirements.

[43] This approach differs from the more detailed taxonomic codes used in the *Reform Up Close* study (see M. Leighton and J. Mullens, *Measuring Curriculum Content: The Status of Recent Work*) designed to measure instructional content at the classroom level.

[44] The National Research Council has proposed different set of standards.

districts that had moved closer to state standards, the "boundaries" between conventional disciplines had been "softened," but there also was more explicit attention to principles of "constructivist learning" and "conceptual understanding." Description of these topics, as district administrators or lead teachers explained how material was presented differently, suggested an ability to actively translate these principles into the curriculum. In many of the other districts, reform was limited to "hands-on science" and these reforms, unfortunately, appeared to be quite similar to the old "cookbook laboratory experiments." Likewise, integration of content from different disciplines (particularly mathematics) often evolved into team teaching, without adoption of a newer integrated curriculum.

The Michigan State study then examined the more complex process of how these proscribed changes in classroom instruction successfully flowed downward from these new district policies[45]. Without commenting on the specific findings at the school level, they found the "LEA actively engaged in instructional policy-making, both defining policy problems and crafting solutions to them" (Spillane et al, 1995, p. 49). This conclusion contrasts with conventional perspectives on local school districts as the passive "implementator" of state and federal policies (or more narrowly concerned with administrative and budgetary issues) rather than directly concerned with instructional content. This active role in instructional policy appeared to be a new development in these districts, and the variability between districts is more striking when specific organizational and historical factors were examined.

It is important to note that formal or (traditional) "channels" of influence had definite limits. Neither curriculum guides, curricular materials, student assessment, nor professional developments were initially influential in shaping mathematics and science reforms when traditional methods were employed. In a narrow sense, most LEAs emphasized the simple coherence of topics and utilized lists ("what teachers should teach") rather than the more radical restructuring of ideas about "substantive reform ideas." There is no question in the Michigan State analysis that two state laws (a mandated core curriculum and fiscal penalties for poor performance) stimulated district administrators to "pay attention to instructional issues for the first time." Despite this opportunity to use these mandates to leverage support for new reform agendas within each district, the distinct variation between districts in their responses, as summarized above,

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[45] The actual classroom implementation of these reforms is the third phase of this study. Of course, how comprehensive district-level curricula facilitates more fundamental changes in instructional practices within schools (even when background variation in content knowledge is considered) provides a rigorous test for this district mediating theory.

does not lend itself to simple a priori explanations[46].

The conceptual approach proposed by Spillane et al to account for these differences relies upon district organizational capacities, organized access to information, and the skill of individual administrators (such as knowledge and commitment).[47] A common theme across these resource capacities was the mobilization of individuals within a district into a more focused and organized collectivity . ("This interaction of organizational and individual resources is a key to understanding an LEA's capacity for instructional reform. Spillane et al, 1995: 57). Before the statewide reform was initiated, most districts had limited structural capacities to initiate new instructional initiatives. Administrative structures were hierarchical and preoccupied with managerial and procedural concerns (i.e., simple mechanical compliance)[48]. The development of resource capacity described in the Michigan State study have certain parallels to James Coleman's (1990) analysis of organizational innovation and the creation of social capital in output-driven systems. In order to construct new curriculum material, district administrators first had to identify knowledgeable experts within the district (usually "lead" teachers) in each discipline, and then organize some sufficient numbers of these individuals willing to collaborate in a "new" enterprise[49].

Second, links to external professional networks[50] provided access to discipline specific knowledge for certain administrators and teachers. Besides providing opportunities to learn about these new reforms first hand from these professional organizations, they allowed participants to bring back to their districts a "sense of ownership of the reform agenda" which they then could communicate with more substantive

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[46] From the perspective of developing a district-level survey in the context of SASS, it is not clear that retrospective accounts at a single point in time can reconstruct how more successful and articulate themes were developed by administrative personnel.

[47] Six factors are identified in the study: knowledge, commitment and disposition, time, funding and labor, professional networks, trust and collaboration.

[48] The obstacles presented by bureaucratic layering (particularly in large districts) has to considered a factor in the slow implementation of reform. It seems that districts had the necessary resources capacities, but had to make specific decisions to mobilize content knowledge and utilize this expertise in a different manner. Different allocations of personnel, time, and funds were critical in the "crafting" of district-wide policy.

[49] From the descriptions in the study, the necessary "critical mass" was a mixture of self-selection (teachers volunteering themselves to lead the reform) and decisions by district administrators about their level of expertise. Apparently, conventional selection standards (no rules seem to have guided the selection) for committee participation were not followed and a decision was made to include teachers from most or all schools to bolster the argument for "representativeness".

[50] These include NCTM, Michigan Council of Teachers of Mathematics, Michigan Partnership for New Education's Frameworks Project, Michigan funded Mathematics and Science Centers. Substantial amount of federal Eisenhower funds flowed to the organizations through professional development programs (allocated to the districts).

conviction to other teachers. The third elements (time, funding, and labor) were resources that district administrators continued to control before and after the new reform initiatives. Small district size and state regulations often imposed serious constraints on the ability of districts to shuffle priorities in order to give more attention to new instructional issues. For example, staffing curriculum development committees and funding substitutes while regular teachers spent one week in professional development seminars required administrative skill (and not budgetary flexibility and available funds).

These case studies provide strong evidence, in my opinion, that the local school districts will play a critical role in educational reform. State legislation has affected the broad parameters of reform in terms of proposing core curriculum, new statewide testing requirements, and funding incentives. But the state mandates cannot be directly translated into new instructional practices at the school level without a restructuring of the relationship between schools and district curriculum policies as demonstrated by these experiences in Michigan. At the same time, other reform strategies that have focused on individual school-level reforms (where the district is bypassed entirely) have not been a "stimulus to change in individual schools over time" (Fuhrman and Elmore, 1995). In the context of the Spillane et al arguments, individual schools do not have the administrative capacity or resources to mobilize curriculum reforms mandated by new standards (although a limited number of high performance schools may have successfully implemented them prior to the establishment of these reforms[51]). In Michigan, a permissive charter law will provide interesting comparisons of different strategies, even though these charters must be "sponsored" by school districts.

The final question, of course, is the ability to consistently "track" different reforms in different states[52]. At least for mathematics and science, comparative "evaluations" have been started as part of the NSF state systemic program (SRI, 1996)[53], and individual states receiving SSI grants have also conducted their own studies[54]. There may be sufficient information from all these studies to extract some common

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[51] The issues in school-level reform, primarily deregulation to promote autonomy and innovation, often find themselves limited to "relatively successful schools, to which eligibility was generally limited, did not find much need to embark on wholesale change, and used deregulation as one of many resources to support innovation." Fuhrman and Elmore, 1995: 293).

[52] Unfortunately, the more detailed case studies have focused on implementation in individual states and the more comprehensive, comparative state analyses focus on national standards without providing analytic methods to examine between district variation within states.

[53] CPRE's new Center, funded through the Governance Institute has proposed additional analysis of state and local reform policy in these 26 states.

[54] It is extremely doubtful that many of the state level studies are comparable in insight and depth to the Michigan State study.

themes concerning the role of district administration in developing instructional content in their schools. Some precipitating event (usually new state requirements, tests, or curriculum policies) provides an identifiable context (when did this occur, what did the district think it would have to do, etc.). Then the process of implementation involves several key elements: how was the new curriculum content constructed? Who was involved, how long did it take, what financial resources were shifted? What was the impact of new testing standards? Were new forms of professional development organized? The articulation of different themes in the new mathematics standards suggests that how administrators "talk" about reform has some relation to what they have done to develop new material, and how they have gone about implementing "reforms" in their schools. And, these administrators usually have some "feedback" from principals, teachers, parents (and probably their school board and superintendent) concerning the "relative progress of change[55]." Michigan is not unique in this "movement" toward "standards based" reform[56]. The organizational structures of local districts have responded, maybe more out of necessity than principle, to these pressures for improved student performance from the state. District administrators have forged new connections with school staff and teachers to design a more coherent, but not always consistent, set of curriculum principles and instructional guidelines. In most cases, the districts have not passively removed themselves from the process and they have not allowed individual schools to mobilize existing capacities or develop new resources for these new standards.

CONCLUSION

The current and future utility of SASS is derivative of these relatively new state education reforms. The only comparative state data on the organizational capacities of districts and schools comes from SASS. Short term student outcomes from state level NAEP are important, but between-state variation often are not as critical as between-district comparison within a state to state level policy makers. They are more concerned with their own performance systems and the quality of instructional capacities and resources within their own state (more importantly how they have changed over time). Accountability within existing governance structures is an active force driving these reforms. State education commissioners are now more attuned to governors and state legislatures, and school superintendents are more responsive to their local

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[55] The Michigan State study included some interesting material on "complaints" (i.e. why the state policies were "unreasonable", why they didn't have money or personnel to prepare the mandated guides, etc.) that help distinguish the relative progress of different districts.

[56] In a survey of 50 state school superintendents or commissioners, 43 claimed that they were revising their assessment and accountability systems in accordance with these principles (Elmore, Abelman and Fuhrman, 1995).

constituencies. Administrative and school organizational processes have changed accordingly, and this change has implications for how a survey is organized and designed.

First, district administrators are no longer exclusively concerned with routine budgetary matters. More important, the details (the dollars, the personnel counts, the number of students, closing old buildings, etc.) are now collected and reported on an accurate and regular basis in the CCD surveys. When the National Center for Education Statistics comes back for the same information from the same administrators, the "bureaucratic response" may vary. The numbers may have changed in the intervening months, certain types of details may never have been available, or the terminology may not be recognizable to administrators in certain types of districts. Large districts are fundamentally different from small districts. Accordingly, questions that overlap with CCD surveys should, in principle, be avoided or subject to a simple and quick review (at the end of the survey: just ask, "by the way, can you quickly confirm these numbers")[57].

If one asks district administrators questions that more relevant to their day-to-day concerns and problems (and which have not been asked before), they can give more detailed, consistent, and informed responses. The questions themselves have to be logically simplified with more introductory explanations to establish common definitions. A major concern of districts is the increasing preference for "choice" mechanisms in student assignment (at a certain level, this is how public schools respond to market pressures for private schools, charters, vouchers, etc.). The slow demise of the neighborhood school[58] presents new problems of matching parental preferences to more distinct educational offerings. If within-school reforms did not work, districts had to shift to district-wide magnet schools and more limited choice options. In the process, the allocation of instructional staff is also subject to similar pressures. Total-school magnet principals are usually allowed to choose most of their staff from any school in the district when the school first opens. What district administrators know (and what school principals do not) is the complexity of shifting students, staff, and finally federal and state money associated with programs for special populations between schools. In most cases, these processes are not random and cannot be reconstructed without understanding the process.

At a minimum, district administrators can describe what they have done, or at least what they have

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[57] Most of the first 22 questions are eliminated by this criteria.

[58] Fixed geographical attendance boundaries were more amenable to sophisticated geocoding schemas and computerized transportations programs. These administrators didn't have to visit a school or talk to a parent.

been doing since some "new" policies were implemented at some fixed point in the recent past[59]. The outline of these policies for student assignments has already been discussed. But the reform process also has to involve teachers and principals. Ironically, many teachers have strong ties and professional investments in the school where they are "employed," but they are employed by the district rather than the school. Subject to a multitude of procedural constraints, teachers can be and are reassigned with only limited "choice" by district administrators. In the 1980's, shifting personnel between schools, arbitrarily, was common. The Michigan State study provides a different perspective on the networks between teachers in different schools, administrators, and professional organizations that are emerging in response to new state content standards. The outlines of these organizational capacities and the resources (often more time than money now) that are necessary to mobilize before instructional change can occur are still controlled by local school districts. Despite strong pressures for decentralization and deregulation, schools themselves have demonstrated limited capacity to initiate reforms except in isolated cases.

The question itself about the future status of a LEA survey, in many ways, mirrors the policy dialogue as discussed by Spillane et al. Maybe, if one continues to avoid the question, the significance of administrative structures will quietly disappear. This probably will not occur. States have chosen not to abolish local school districts, and only under extreme conditions such as receivership has states decided to administrate districts with state personnel. The only alternative is to review, step-by-step, the implementation process of new reforms at the district level in each state. The administrative process reflects a common set of instructional themes and new accountability mechanisms. The major changes are compatible with a new and measurable discourse.

[59] Despite the idiosyncratic labels embedded in district-wide reforms, below the surface there are common features.

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Appendix I

STATE	DISTRICT SAMPLING			SCHOOL SAMPLING			CCD	Dist
	Dist	School	Ave.	Dist	School	Ave.	Ave	>10k
Alabama	42	203	4.8	103	221	2.1	10.0	6
Alaska	15	136	9.1	46	196	4.3	8.7	3
Arizona	50	246	4.9	95	170	1.8	5.0	14
Arkansas	61	173	2.8	126	164	1.3	3.4	2
California	99	394	4.0	268	416	1.6	7.2	53
Colorado	31	301	9.7	74	173	2.3	7.6	16
Delaware	22	51	2.3	19	72	3.8	8.0	
Dist of Col	1	35	35.0	1	72	72.0	181.0	
Florida	20	400	20.0	55	258	4.7	37.0	19
Georgia	44	286	6.5	97	179	1.8	9.4	17
Hawaii	1	73	73.0	1	94	84.0	238	1
Idaho	36	167	4.6	79	166	2.1	2.3	4
Illinois	94	344	3.7	193	283	1.5	4.2	9
Indiana	61	218	3.6	132	184	1.4	6.2	10
Iowa	72	204	2.8	128	169	1.3	3.6	6
Kansas	57	243	4.3	110	161	1.5	4.9	6
Kentucky	42	201	4.8	98	167	1.7	7.9	3
Louisiana	29	297	10.2	67	225	3.4	20.5	15
Maine	54	173	3.2	105	152	1.4	3.2	0
Maryland	14	293	20.9	23	171	7.4	52.6	12
Massachusetts	67	212	3.2	157	229	1.5	5.0	7
Michigan	85	329	3.9	189	227	1.2	5.2	16
Minnesota	72	200	2.8	134	171	1.3	3.7	13
Missouri	76	249	3.3	126	178	1.4	4.1	13
Montana	70	137	2.0	155	161	1.0	1.8	1
Nebraska	71	204	2.9	116	170	1.5	2.0	3
Nevada	11	193	17.5	18	119	6.6	21.3	2
New Hamphsire	46	135	2.9	76	120	1.6	2.7	2
New Jersey	93	223	2.4	151	194	1.3	3.9	9
New Mexico	25	188	7.5	62	142	2.3	7.4	7
New York	63	384	6.1	201	313	1.6	5.3	7
North Carolina	41	325	7.9	92	184	2.0	14.9	21
North Dakota	47	136	2.9	130	162	1.2	2.3	2
Ohio	93	239	2.6	155	196	1.3	6.1	10
Oklahoma	72	230	3.2	235	161	.7	3.2	10
Oregon	53	255	4.8	107	170	1.6	4.1	7
Pennsylvania	88	225	2.6	159	196	1.2	6.0	6
Rhode Island	23	158	6.9	35	106	3.0	8.5	2
South Carolina	38	257	6.8	70	164	2.3	11.6	13
South Dakota	48	131	2.7	112	164	1.5	3.5	2
Tennessee	35	258	7.4	86	189	2.2	10.9	12
Texas	84	442	5.3	291	413	1.4	5.9	45
Utah	20	257	12.9	31	170	5.5	17.8	11
Vermont	62	91	1.5	92	108	1.2	1.3	0
Virginia	35	275	7.9	92	188	2.0	13.4	15
Washington	56	298	5.3	117	197	1.7	6.8	18
West Virginia	28	216	7.7	55	178	3.2	16.6	6
Wisconsin	64	219	3.4	126	170	1.3	4.8	7
Wyoming	55	96	1.7	50	131	2.6	.	0
Total	2573	11379	4.4	6459	9333	1.7	4.4	470

Listing of NCES Working Papers to Date

Number	Title	Contact
94-01	Schools and Staffing Survey (SASS) Papers Presented at Meetings of the American Statistical Association	Dan Kasprzyk
94-02	Generalized Variance Estimate for Schools and Staffing Survey (SASS)	Dan Kasprzyk
94-03	1991 Schools and Staffing Survey (SASS) Reinterview Response Variance Report	Dan Kasprzyk
94-04	The Accuracy of Teachers' Self-reports on their Postsecondary Education: Teacher Transcript Study, Schools and Staffing Survey	Dan Kasprzyk
94-05	Cost-of-Education Differentials Across the States	William Fowler
94-06	Six Papers on Teachers from the 1990-91 SASS and Other Related Surveys	Dan Kasprzyk
94-07	Data Comparability and Public Policy: New Interest in Public Library Data Papers Presented at Meetings of the American Statistical Association	Carrol Kindel
95-01	Schools and Staffing Survey: 1994 papers presented at the 1994 Meeting of the American Statistical Association	Dan Kasprzyk
95-02	QED Estimates of the 1990-91 Schools and Staffing Survey: Deriving and Comparing QED School Estimates with CCD Estimates	Dan Kasprzyk
95-03	Schools and Staffing Survey: 1990-91 SASS Cross-Questionnaire Analysis	Dan Kasprzyk

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Number	Title	Contact
95-04	National Education Longitudinal Study of 1988: Second Follow-up Questionnaire Content Areas and Research Issues	Jeffrey Owings
95-05	National Education Longitudinal Study of 1988: Conducting Trend Analyses of NLS-72, HS&B, and NELS:88 Seniors	Jeffrey Owings
95-06	National Education Longitudinal Study of 1988: Conducting Cross-Cohort Comparisons Using HS&B, NAEP, and NELS:88 Academic Transcript Data	Jeffrey Owings
95-07	National Education Longitudinal Study of 1988: Conducting Trend Analyses HS&B and NELS:88 Sophomore Cohort Dropouts	Jeffrey Owings
95-08	CCD Adjustments to the 1990-91 SASS: A Comparison of Estimates	Dan Kasprzyk
95-09	The Results of the 1993 Teacher List Validation Study (TLVS)	Dan Kasprzyk
95-10	The Results of the 1991-92 Teacher Follow-up Survey (TFS) Reinterview and Extensive Reconciliation	Dan Kasprzyk
95-11	Measuring Instruction, Curriculum Content, and Instructional Resources: The Status of Recent Work	Sharon Bobbitt & John Ralph
95-12	Rural Education Data User's Guide	Samuel Peng

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Number	Title	Contact
95-13	Assessing Students with Disabilities and Limited English Proficiency	James Houser
95-14	Empirical Evaluation of Social, Psychological, & Educational Construct Variables Used in NCES Surveys	Samuel Peng
95-15	Classroom Instructional Processes: A Review of Existing Measurement Approaches and Their Applicability for the Teacher Follow-up Survey	Sharon Bobbitt
95-16	Intersurvey Consistency in NCES Private School Surveys	Steven Kaufman
95-17	Estimates of Expenditures for Private K-12 Schools	Steve Broughman
95-18	An Agenda for Research on Teachers and Schools: Revisiting NCES' Schools and Staffing Survey	Dan Kasprzyk
96-01	Methodological Issues in the Study of Teachers' Careers: Critical Features of a Truly Longitudinal Study	Dan Kasprzyk
96-02	Schools and Staffing Survey (SASS): 1995 Selected papers presented at the 1995 Meeting of the American Statistical Association	Dan Kasprzyk
96-03	National Education Longitudinal Study of 1988 (NELS:88) Research Framework and Issues	Jeffrey Owings
96-04	Census Mapping Project/School District Data Book	Tai Phan

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Number	Title	Contact
96-05	Cognitive Research on the Teacher Listing Form for the Schools and Staffing Survey	Dan Kasprzyk
96-06	The Schools and Staffing Survey (SASS) for 1998-99: Design Recommendations to Inform Broad Education Policy	Dan Kasprzyk
96-07	Should SASS Measure Instructional Processes and Teacher Effectiveness?	Dan Kasprzyk
96-08	How Accurate are Teacher Judgments of Students' Academic Performance?	Jerry West
96-09	Making Data Relevant for Policy Discussions: Redesigning the School Administrator Questionnaire for the 1998-99 SASS	Dan Kasprzyk
96-10	1998-99 Schools and Staffing Survey: Issues Related to Survey Depth	Dan Kasprzyk
96-11	Towards an Organizational Database on America's Schools: A Proposal for the Future of SASS, with comments on School Reform, Governance, and Finance	Dan Kasprzyk
96-12	Predictors of Retention, Transfer, and Attrition of Special and General Education Teachers: Data from the 1989 Teacher Followup Survey	Dan Kasprzyk
96-13	Estimation of Response Bias in the NHES:95 Adult Education Survey	Steven Kaufman
96-14	The 1995 National Household Education Survey: Reinterview Results for the Adult Education Component	Steven Kaufman
96-15	Nested Structures: District-Level Data in the Schools and Staffing Survey	Dan Kasprzyk